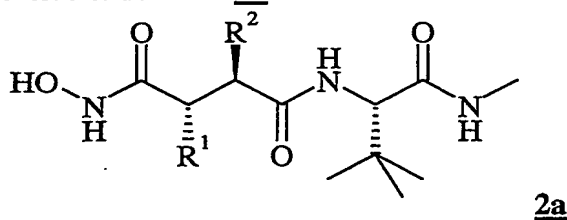


Patent Claims

- 1) Pharmaceutical composition, characterised in that it contains one or more anticholinergics (1) in combination with one or more TACE inhibitors (2) optionally in the form of the individual optical isomers, mixtures thereof or racemates and optionally in the form of the pharmacologically acceptable acid addition salts thereof, optionally in the form of the solvates or hydrates and optionally together with a pharmaceutically acceptable excipient.
- 2) Pharmaceutical composition according to claim 1, characterised in that 1 is selected from among the tiotropium salts, oxitropium salts or ipratropium salts, preferably tiotropium salts.
- 3) Pharmaceutical composition according to claim 2, characterised in that 1 is present in the form of the chloride, bromide, iodide, methanesulphonate or para-toluenesulphonate, preferably in the form of the bromide.
- 4) Pharmaceutical composition according to one of claims 1 to 3, characterised in that 2 is selected from among SL422, SP057, SC903, SE205, Ro-32-7315, BMS-561392 and PKF 242-484.
- 5) Pharmaceutical composition according to one of claims 1 to 3, characterised in that 2 is selected from compounds of formula 2a

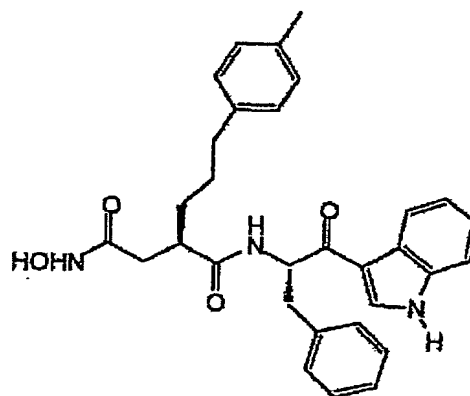
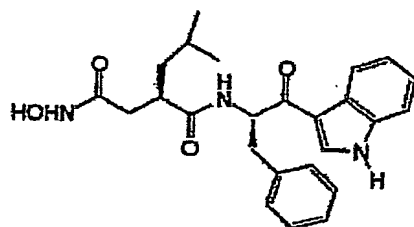
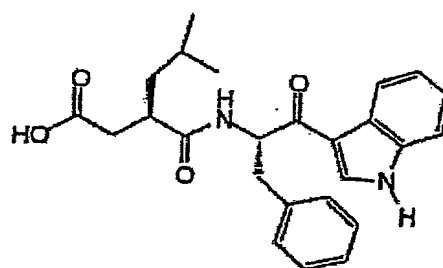
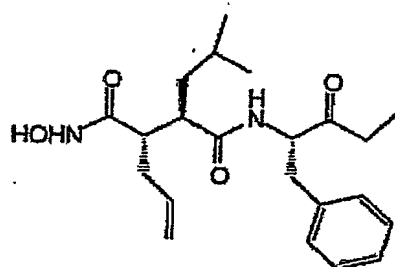
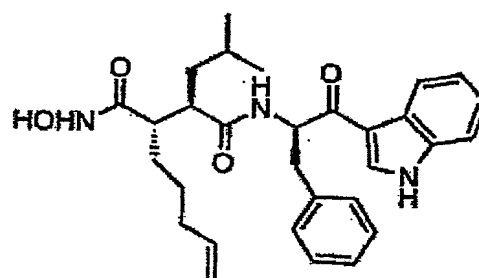
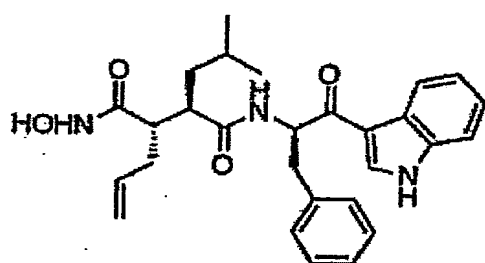
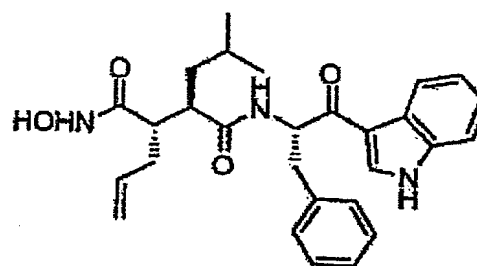
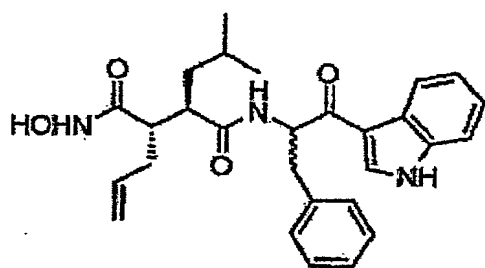


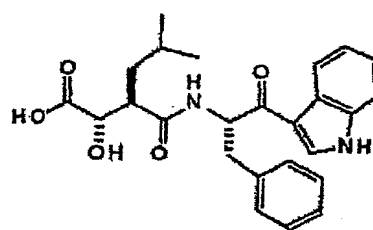
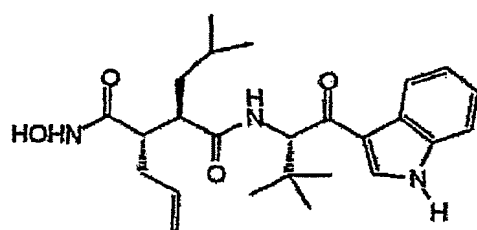
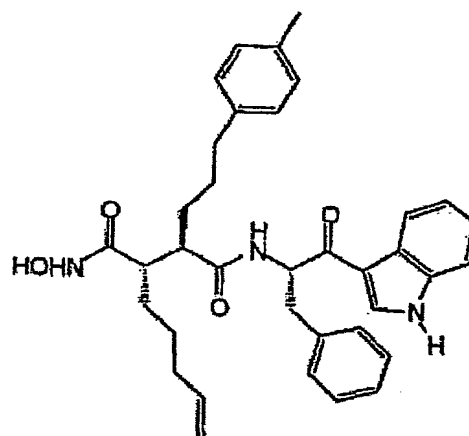
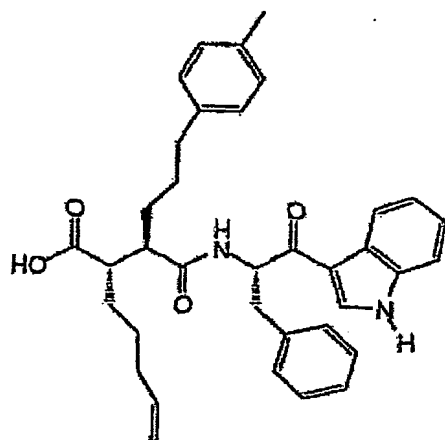
wherein

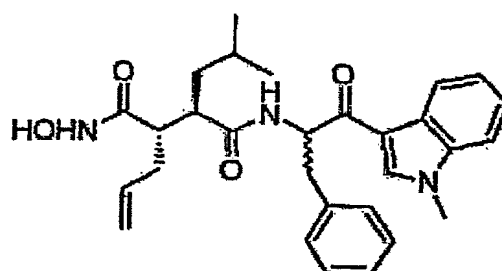
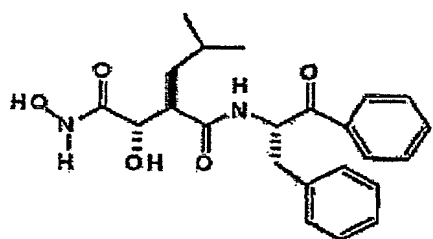
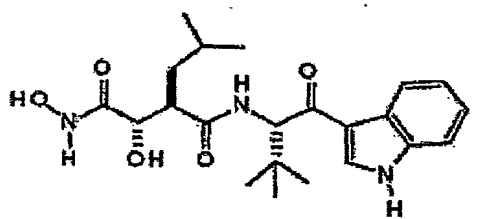
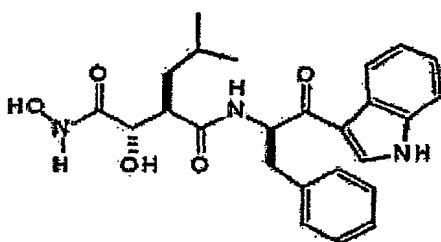
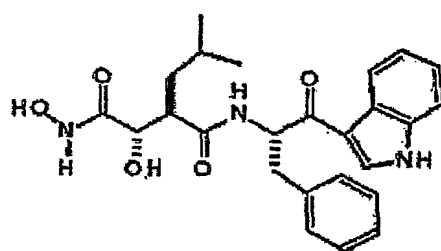
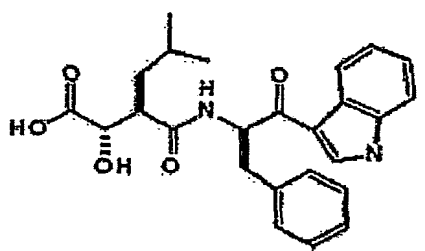
R¹ denotes OH or CH₂OH and

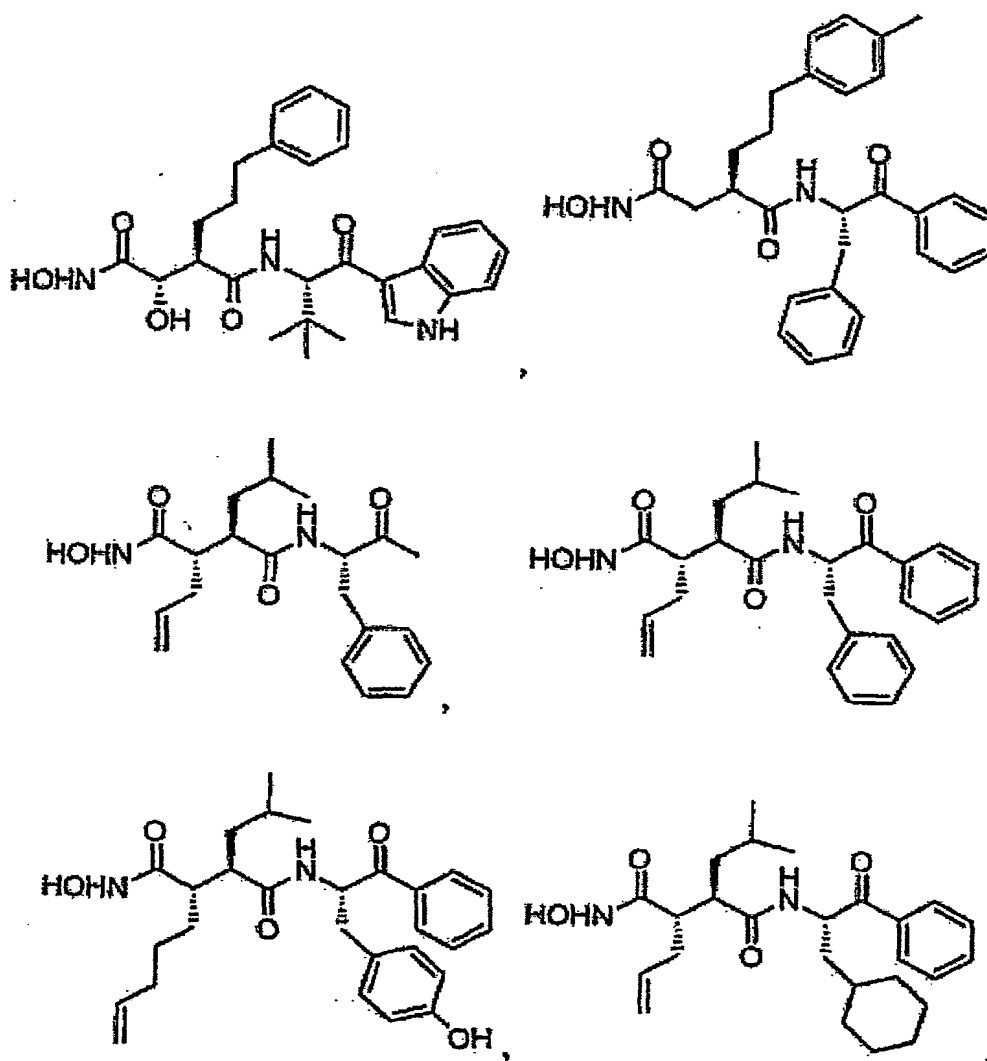
R² denotes iso-butyl, phenyl, 4-methyl-phenyl or 4-methoxy-phenyl.

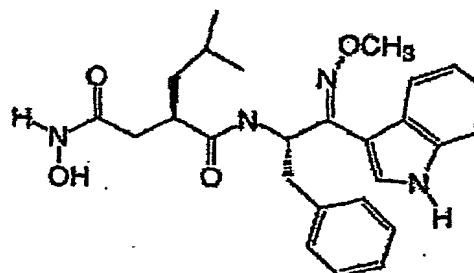
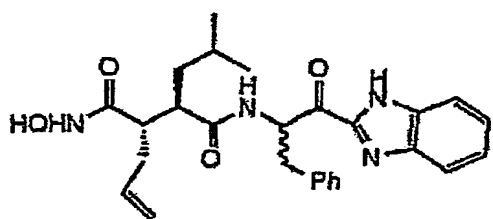
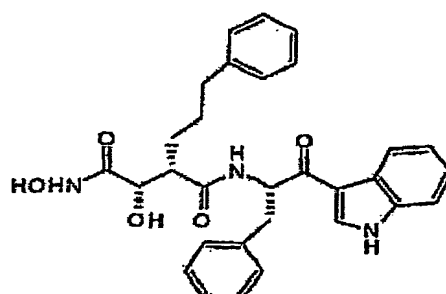
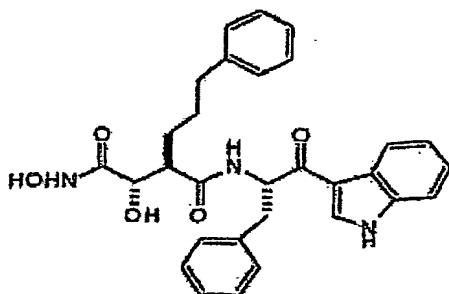
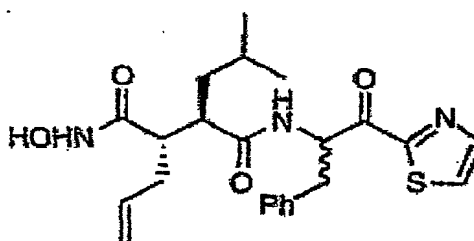
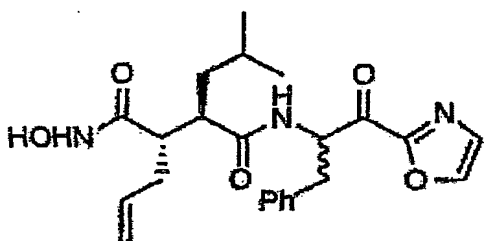
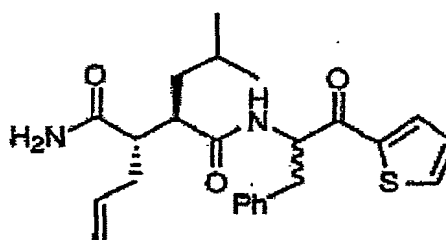
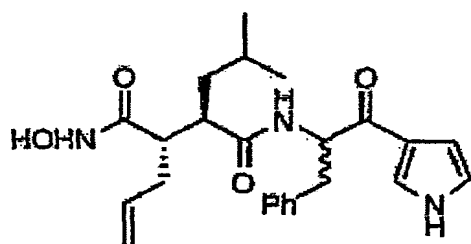
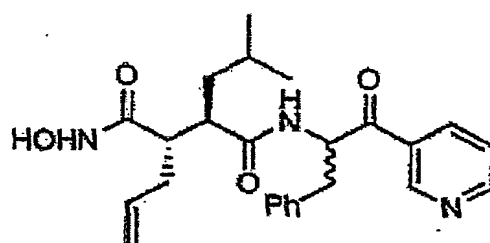
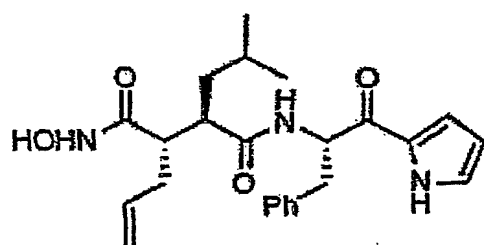
- 6) Pharmaceutical composition according to one of claims 1 to 3, characterised in that 2 is selected from the group of compounds consisting of:

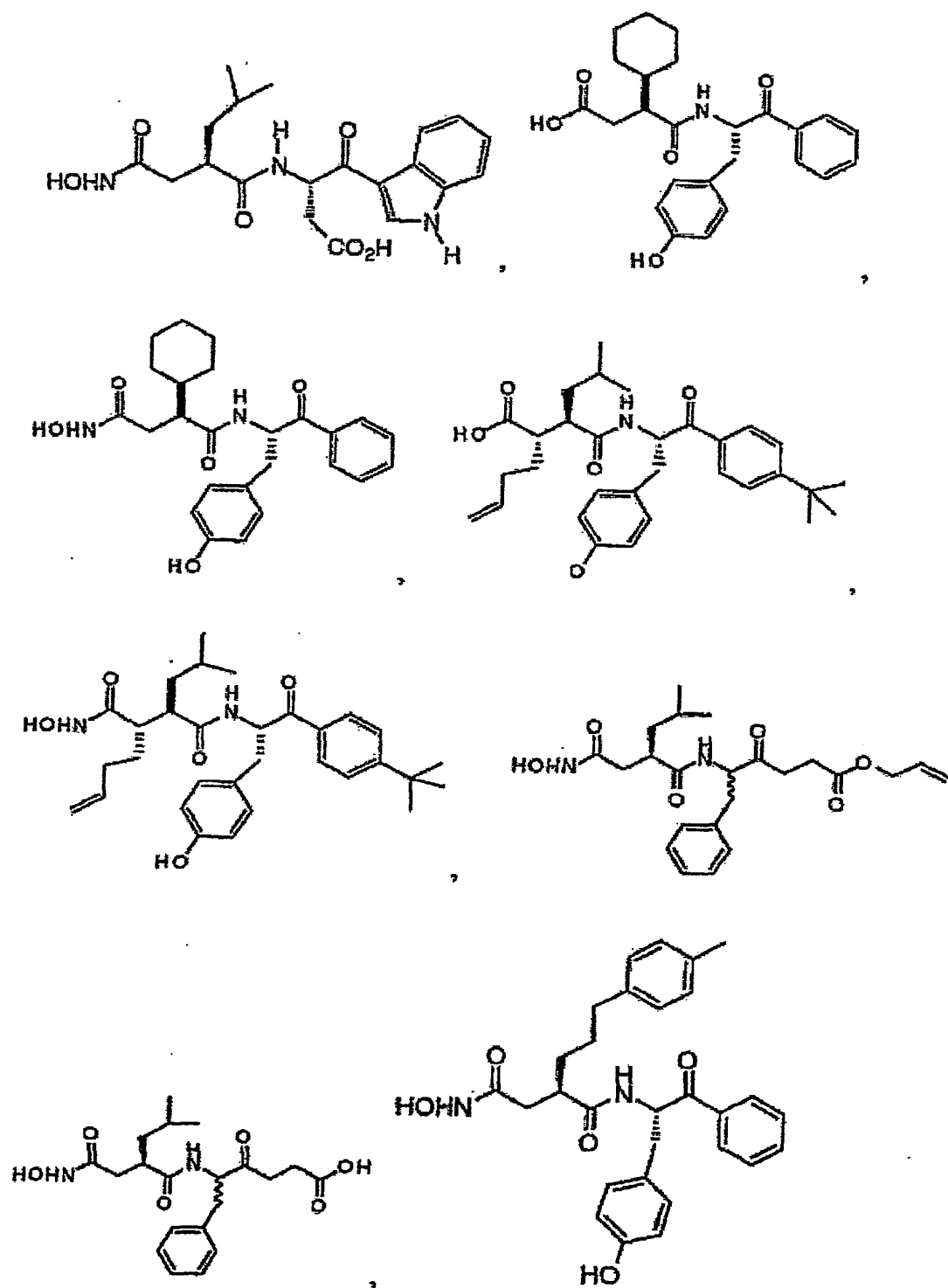


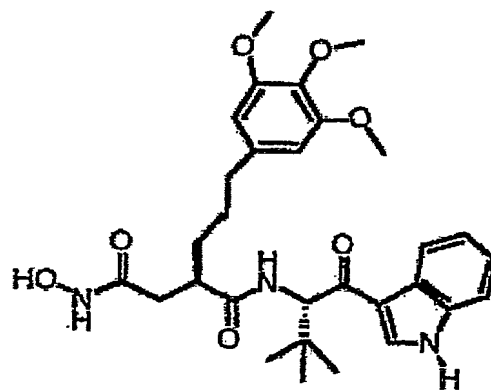
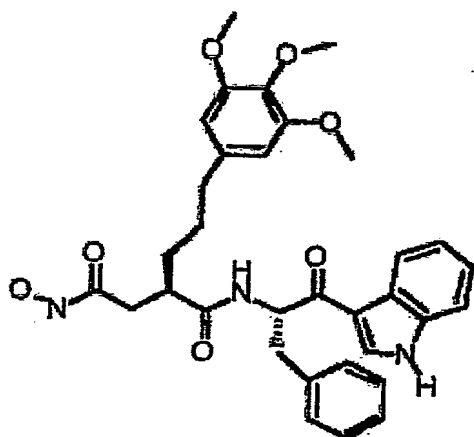
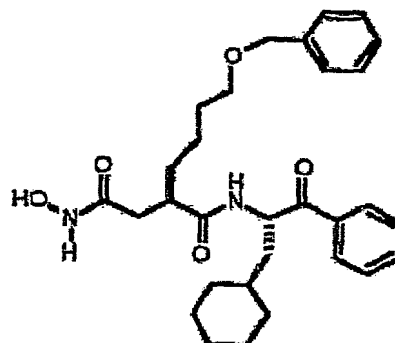
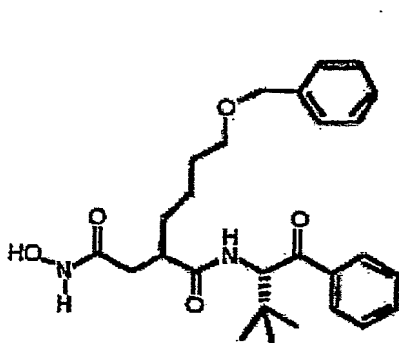
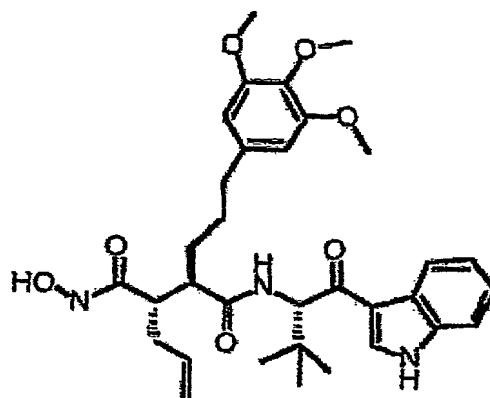
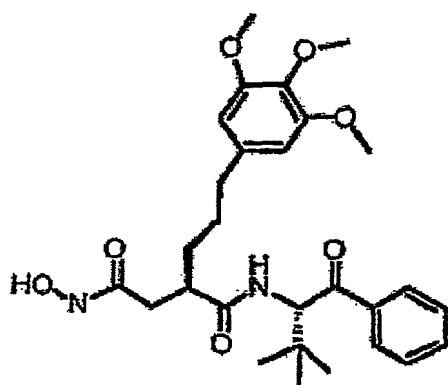


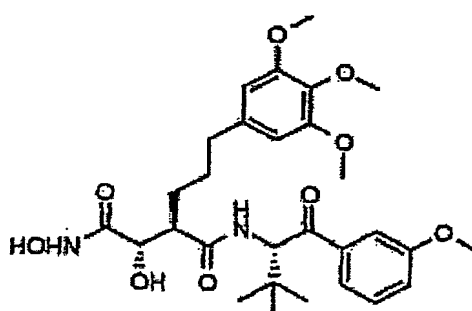
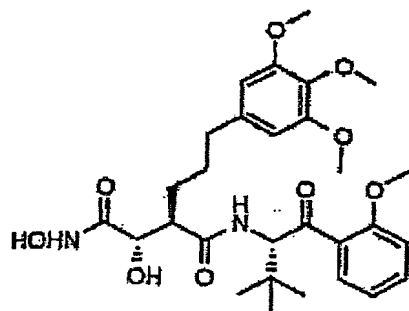
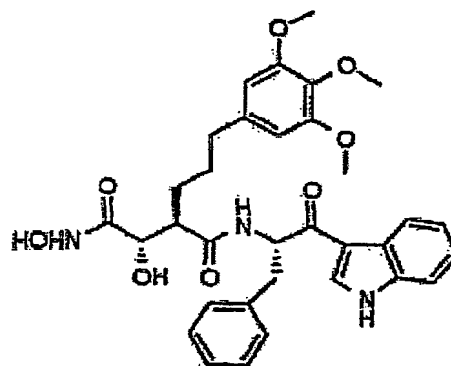
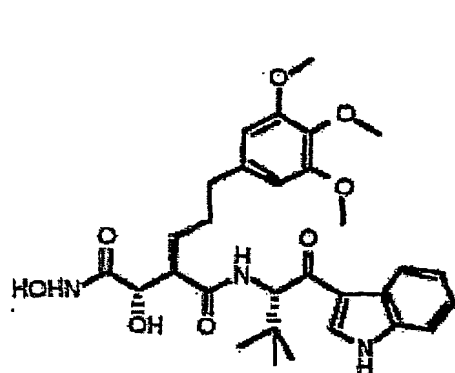


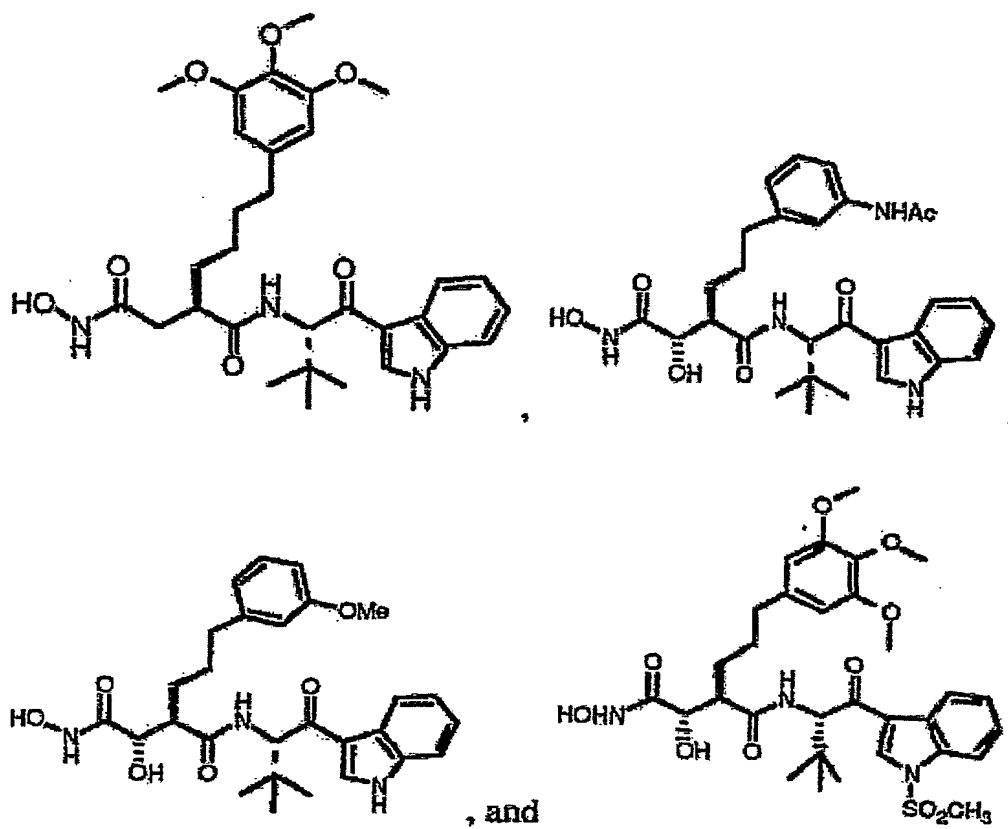




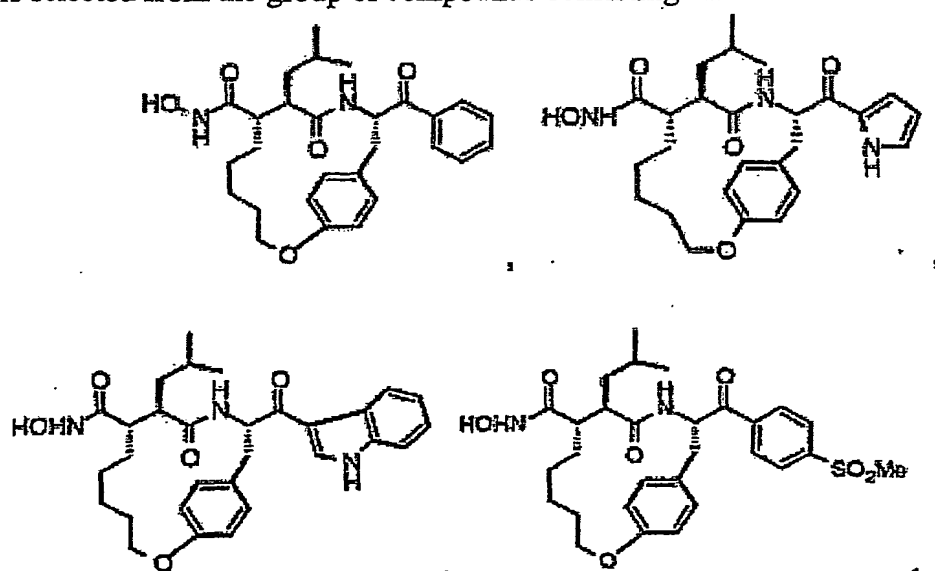


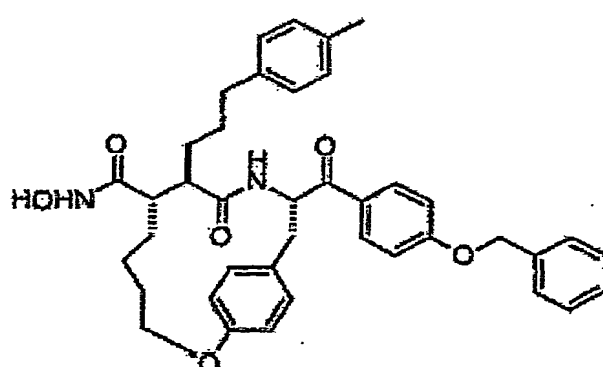
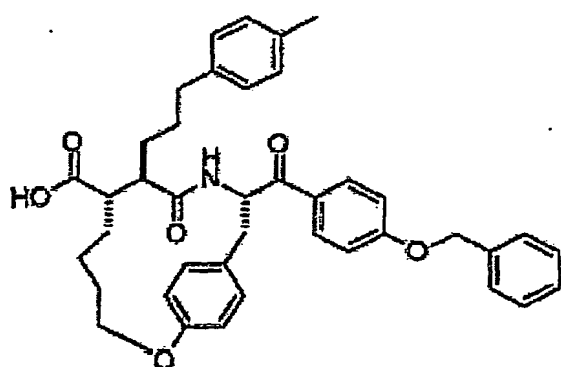
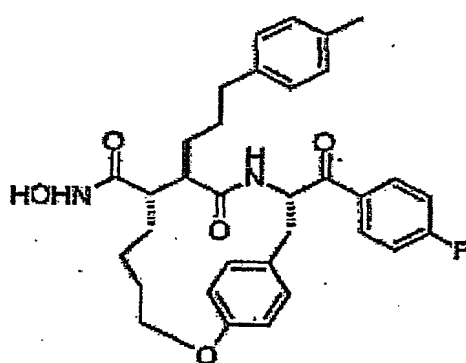
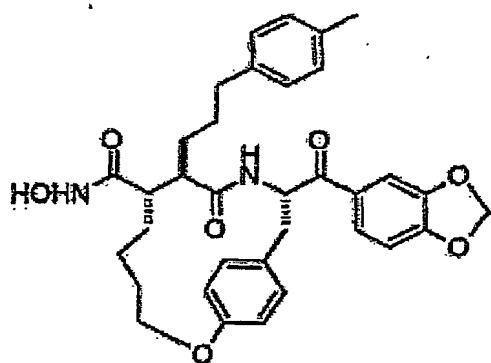
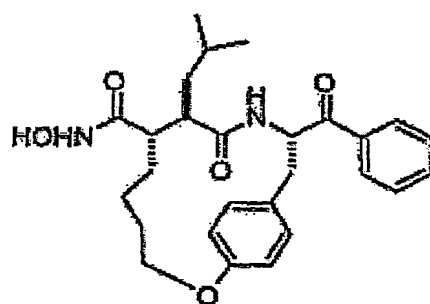
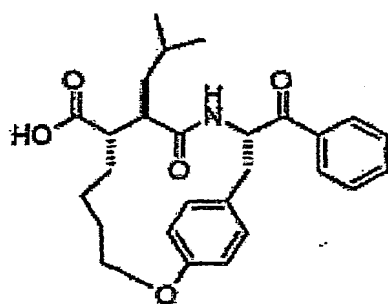
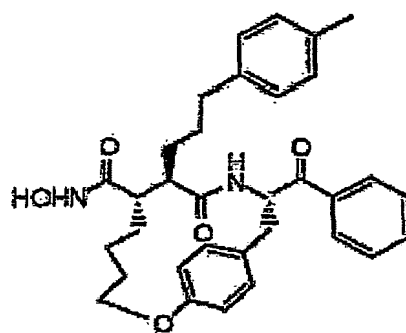
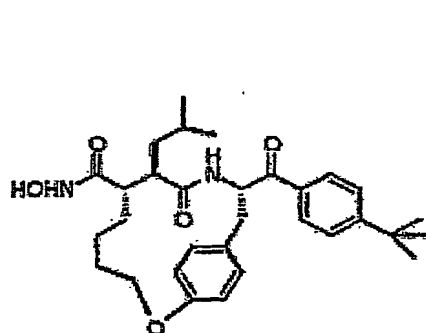


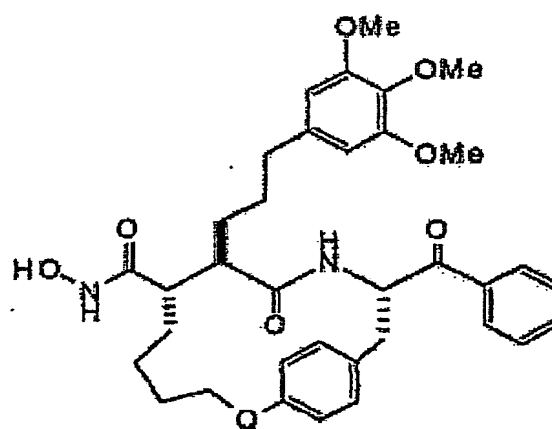
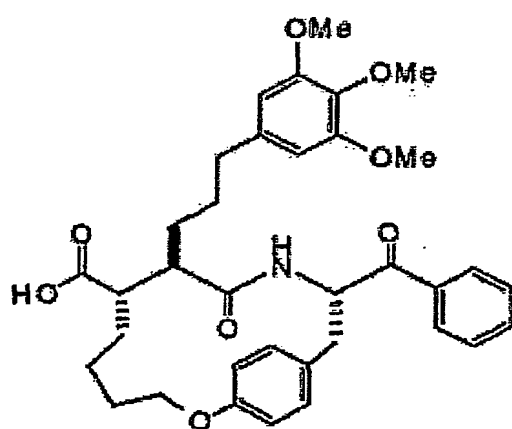
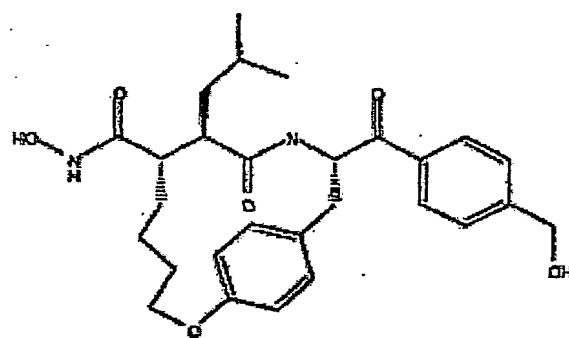
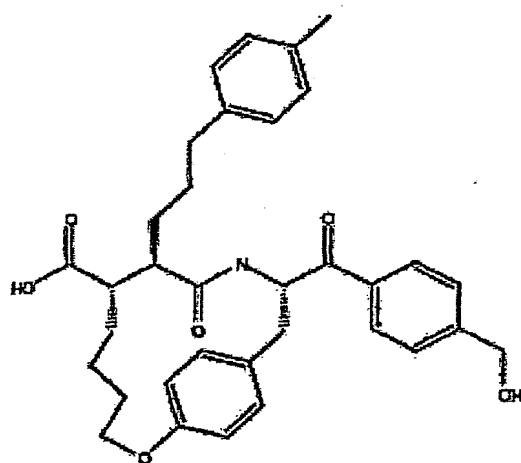
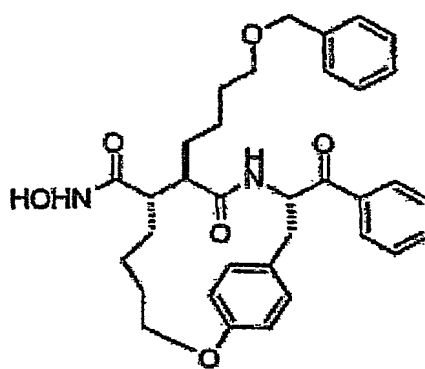
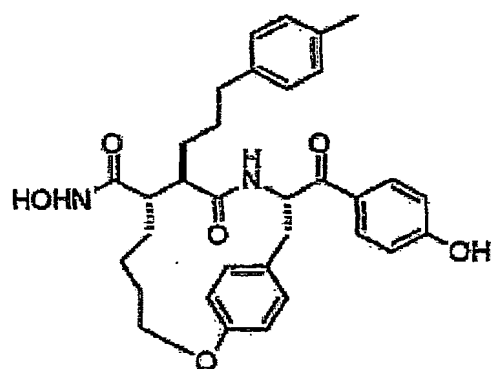


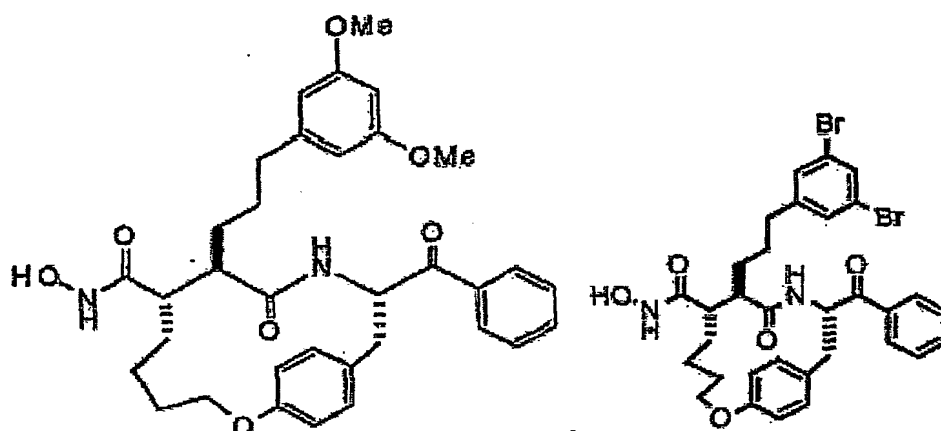


7) Pharmaceutical composition according to one of claims 1 to 3, characterised in that 2 is selected from the group of compounds consisting of:









8) Pharmaceutical composition according to one of claims 1 to 3, characterised in that 2 is selected from the group of compounds consisting of:

- (2*R*,3*S*)-3-(Formyl-hydroxyamino)-2-(2-methyl-1-propyl)hexanoic acid [(1*S*)-2,2-dimethyl-1-(1,3-thiazol-2ylcarbamoyl)-1-propyl]amide;
- (2*R*,3*S*)-3-(Formyl-hydroxyamino)-2-(2-methyl-1-propyl)-4-methylpentanoic acid [(1*S*,2*S*)-2-methyl-1-(2-pyridylcarbamoyl)-1-butyl]amide;
- (2*R*,3*S*)-3-(Formyl-hydroxyamino)-2-(2-methyl-1-propyl)-6,6,6-trifluorohexanoic acid [(1*S*,2*R*)-2-methoxy-1-(1,3-thiazol-2ylcarbamoyl)-1-propyl]amide;
- (2*R*,3*S*)-3-(Formyl-hydroxyamino)-2-(2-methyl-1-propyl)pentanoic acid [(1*S*)-2,2-dimethyl-1-(1,3-thiazol-2ylcarbamoyl)-1-propyl]amide;
- (2*R*,3*S*)-3-(Formyl-hydroxyamino)-2-(2-methyl-1-propyl)-4-methylpentanoic acid [(1*S*)-3-(2-pyridylcarbonylamino)-1-(1,3-thiazol-2ylcarbamoyl)-1-propyl]amide;
- (2*R*,3*S*)-3-(Formyl-hydroxyamino)-2-(2-methyl-1-propyl)-6,6,6-trifluorohexanoic acid [(1*S*,2*S*)-2-methyl-1-(2-pyridylcarbamoyl)-1-butyl]amide;
- (2*R*,3*S*)-3-(Formyl-hydroxyamino)-2-(2-methyl-1-propyl)butanoic acid [(1*S*,2*R*)-2-methoxy-1-(1,3-thiazol-2ylcarbamoyl)-1-propyl]amide;
- (2*R*,3*S*)-3-(Formyl-hydroxyamino)-2-(2-methyl-1-propyl)butanoic acid [(1*S*)-2,2-dimethyl-1-(1,3-thiazol-2ylcarbamoyl)-1-propyl]amide;
- (2*R*,3*S*)-3-(Formyl-hydroxyamino)-2-(2-methyl-1-propyl)-6,6,6-trifluorohexanoic acid [(1*S*,2*S*)-2-methyl-1-(1,3-thiazol-2ylcarbamoyl)-1-butyl]amide.

9) Pharmaceutical composition according to one of claims 1 to 3, characterised in that 2 is selected from the group of compounds consisting of:

- N-hydroxy-2(R)-[(4-methoxybenzenesulfonyl)(4-picolyl)amino]-2-(*trans*-4-propoxycyclohexyl)-acetamide;
- N-hydroxy-2(R)-[(4-ethoxybenzenesulfonyl)(4-picolyl)amino]-2-(*trans*-4-propoxycyclohexyl)-acetamide;
- 5 - N-hydroxy-2(R)-[(4-ethoxybenzenesulfonyl)(4-picolyl)amino]-2-(*trans*-4-ethoxycyclohexyl)-acetamide.

10) Pharmaceutical composition according to one of claims 1 to 3, characterised in that 2 is selected from the group of compounds consisting of:

- 10 - 3-[4-(4-fluorophenoxy)benzenesulfonylamino]azetidine-3-carboxylic acid hydroxyamide;
- 4-[4-(4-fluorophenoxy)benzenesulfonylamino]piperidine-4-carboxylic acid hydroxyamide.

15 11) Pharmaceutical composition according to one of claims 1 to 3, characterised in that 2 is selected from the group of compounds consisting of:

- (2*R*,3*S*)-N-hydroxy-3ethynyl-1-(4-methoxybenzenesulfonyl)-piperidine-2-carboxamide;
- (2*R*,3*S*)-N-hydroxy-1-(4-methoxybenzenesulfonyl)-3-(5-methoxythiophene-2-yl-hynyl)-piperidine-2 carboxamide;
- 20 - (2*R*,3*R*)-N-hydroxy-1-(4-methoxybenzenesulfonyl)-3-(3-pyridin-3-yl-prop-2-yl)-piperidine-2-carboxamide;
- (2*S*,3*R*)-N-hydroxy-4-(4-methoxybenzenesulfonyl)-2-pyridine-3-yl-morpholine-3-carboxamide;
- 25 - (2*S*,3*R*)-N-hydroxy-2-hydroxycarbamoyl-4-(4-methoxybenzenesulfonyl)-morpholine-3-carboxamide;
- (2*R*,3*R*)-N-hydroxy-2-hydroxycarbamoyl-4-(4-methoxybenzenesulfonyl)-piperidine-2-carboxamide;
- (2*R*,3*S*)-N-hydroxy-1-(4-methoxybenzenesulfonyl)-3-(4-phenylpyridine-2-yl)-
- 30 iperidine-2-carboxamide;
- (2*S*,3*R*)-N-hydroxy-1-(4-methoxybenzenesulfonyl)-2-(4-phenylpyridine-2-yl)-morpholine-2-carboxamide;
- (2*R*,3*S*)-N-hydroxy-3-(2-chloro-4-fluorophenyl)-1-(4-methoxybenzenesulfonyl)-piperidine-2-carboxamide; and

- (2*S*,3*R*)-*N*-hydroxy-2-(2-chloro-4-fluorophenyl)-1-(4-methoxybenzenesulfonyl)-piperidine-3-carboxamide.

- 12) Pharmaceutical composition according to one of claims 1 to 11, characterised in
5 that the active substances 1 and 2 are present either together in a single formulation or in two separate formulations.
- 13) Pharmaceutical composition according to one of claims 1 to 12, characterised in
10 that the weight ratios of 1 to 2 are in the range from 1:1000 to 1:1, preferably from 1:250 to 1:2.
- 14) Pharmaceutical composition according to one of claims 1 to 13, characterised in
that a single administration corresponds to a dose of the active substance combination 1
and 2 of 1 to 10000µg, preferably from 10 to 5000µg.
- 15) Pharmaceutical composition according to one of claims 1 to 14, characterised in
15 that it is in the form of a formulation suitable for inhalation.
- 16) Pharmaceutical composition according to claim 15, characterised in that it is a
formulation selected from among inhalable powders, propellant-containing metering
aerosols and propellant-free inhalable solutions or suspensions.
- 17) Pharmaceutical composition according to claim 16, characterised in that it is an
20 inhalable powder which contains 1 and 2 in admixture with suitable physiologically
acceptable excipients selected from among the monosaccharides, disaccharides, oligo- and
polysaccharides, polyalcohols, salts, or mixtures of these excipients with one another.
- 18) Inhalable powder according to claim 17, characterised in that the excipient has a
maximum mass mean aerodynamic diameter of up to 250µm, preferably between 10 and
25 150µm.
- 19) Capsules, characterised in that they contain an inhalable powder according to claim
17 or 18.

- 20) Pharmaceutical composition according to claim 16, characterised in that it is an inhalable powder which contains only the active substances 1 and 2 as its ingredients.
- 21) Pharmaceutical composition according to claim 16, characterised in that it is a propellant-containing inhalable aerosol which contains 1 and 2 in dissolved or dispersed
5 form.
- 22) Propellant-containing inhalable aerosol according to claim 21, characterised in that it contains, as propellant gas, hydrocarbons such as n-propane, n-butane or isobutane or halohydrocarbons such as chlorinated and/or fluorinated derivatives of methane, ethane, propane, butane, cyclopropane or cyclobutane.
- 10 23) Propellant-containing inhalable aerosol according to claim 22, characterised in that the propellant gas is TG134a, TG227 or a mixture thereof.
- 24) Pharmaceutical composition according to claim 16, characterised in that it is a propellant-free inhalable solution or suspension which contains water, ethanol or a mixture of water and ethanol as solvent.
- 15 25) Inhalable solution or suspension according to claim 24, characterised in that the pH is 2 - 7, preferably 2 -5.
- 26) Use of a capsule according to claim 19 in an inhaler, preferably in a Handihaler.
- 27) Use of an inhalable solution according to one of claims 24 or 25 for nebulising in
20 an inhaler according to WO 91/14468 or an inhaler as described in Figures 6a and 6b of WO 97/12687.
- 28) Use of a composition according to one of claims 1 to 25 for preparing a medicament for treating inflammatory or obstructive diseases of the respiratory tract.